

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A measurement device configured to measure a profile of a part, comprising:

a feeler;

a manipulation knob connected to the feeler;

a support;

a table with two perpendicular movements, the table linking the support to the feeler;

a pair of displacement transducers situated between mobile portions of the table, the pair of displacement transducer being configured to measure displacements according to the perpendicular movements;

a machining mandrel on which the part comprising the profile is installed; and

means for reading and storing in a memory the displacements measured, wherein the support and the mandrel are mutually movable and comprise complementary immobilization means,

wherein the complementary immobilization means comprise a pair of pins.

Claim 2 (Currently Amended): A measurement device configured to measure a profile of a part, comprising:

a feeler;

a manipulation knob connected to the feeler;

a support;

a table with two perpendicular movements, the table linking the support to the feeler;

a pair of displacement transducers situated between mobile portions of the table, the pair of displacement transducer being configured to measure displacements according to the perpendicular movements;

a machining mandrel on which the part comprising the profile is installed; and means for reading and storing in a memory the displacements measured, wherein the support and the mandrel are mutually movable and comprise complementary immobilization means.

~~Measurement device according to claim 1,~~ wherein the immobilization means of the support comprise a first pair of travel stops oriented in the same direction as the feeler, the feeler being situated between the travel stops, and the immobilization means comprise flat surfaces for receiving the travel stops.

Claims 3-8 (Cancelled).

Claim 9 (Currently Amended): A measurement device configured to measure a profile of a part, comprising:

a feeler;

a manipulation knob connected to the feeler;

a support;

a table with two perpendicular movements, the table linking the support to the feeler;

a pair of displacement transducers situated between mobile portions of the table, the pair of displacement transducer being configured to measure displacements according to the perpendicular movements;

a machining mandrel on which the part comprising the profile is installed; and

means for reading and storing in a memory the displacements measured, wherein the support and the mandrel are mutually movable and comprise complementary immobilization means,

~~Measurement device according to claim 1,~~ wherein the device comprises a measurement standard bearer of complementary means for ~~the~~ immobilization means of the support, and

wherein the measurement standard includes a test profile for the feeler and complementary means for the immobilization means.

Claim 10 (Currently Amended): A measurement device configured to measure a profile of a part, comprising:

a feeler;

a manipulation knob connected to the feeler;

a support;

a table with two perpendicular movements, the table linking the support to the feeler;

a pair of displacement transducers situated between mobile portions of the table, the pair of displacement transducer being configured to measure displacements according to the perpendicular movements;

a machining mandrel on which the part comprising the profile is installed; and

means for reading and storing in a memory the displacements measured, wherein the support and the mandrel are mutually movable and comprise complementary immobilization means,

~~Measurement device according to claim 1,~~ wherein the feeler comprises an oblique rod, ~~a return device of the rod between two positions at either end of a U-turn, a second pair of travel stops of the rod at the two positions, and a holding means of the rod at the two~~

positions a device for rotating the rod between two diametrically opposed predetermined positions, and a second pair of travel stops of the rod for defining the two opposed positions.

Claim 11 (Previously Presented): Measurement device according to claim 2, wherein the device comprises reference feelers associated with the first pair of travel stops.

Claim 12 (Previously Presented): Measurement device according to claim 1, wherein the device comprises a control for a start and a stoppage of the displacement memory storage.

Claim 13 (Currently Amended): Profile measurement process of a part involving a portable feeler device, the process comprising:

~~calibrating the portable feeler device;~~
~~assembling the portable feeler device at a fixed position as compared with the part;~~
assembling the portable feeler device to a standard, in associating immobilization means on the portable feeler device complementary immobilization means on the standard,
and calibrating the portable feeler device to then disassembling the portable feeler device from the standard,

assembling the portable feeler device at a fixed position as compared with the part, in associating said immobilization means on the portable feeler device to complementary immobilization means on the mandrel, said immobilization means on the mandrel being similar to the immobilization means on the standard,

manually displacing the feeler along the profile; and
automatically correcting measurement errors due to wear or deformation of the feeler, using the results of the calibration.

Claim 14 (Previously Presented): Measurement device according to claim 1, wherein the immobilization means of the support are respectively associated to the immobilization means of the mandrel so as to determine one invariable immobilization position of the support on the mandrel.

Claim 15 (Currently Amended): A measurement device configured to measure a profile of a part, comprising:

a feeler;

a manipulation knob connected to the feeler;

a support;

a table with two perpendicular movements, the table linking the support to the feeler;

a pair of displacement transducers situated between mobile portions of the table, the pair of displacement transducer being configured to measure displacements according to the perpendicular movements;

a machining mandrel on which the part comprising the profile is installed; and

means for reading and storing in a memory the displacements measured, wherein the support and the mandrel are mutually movable and comprise complementary immobilization means,

wherein immobilization means of the support are respectively associated to immobilization means of the mandrel so as to determine one invariable immobilization position of the support on the mandrel,

~~Measurement device according to claim 14,~~ wherein the immobilization means of the support comprise a pair of pins, the mandrel comprises recesses having cross-section shapes corresponding to cross-section shapes of the pins, respectively, in which the pins can be engaged, the immobilization means of the support comprise a pair of travel stops, the feeler

being situated between the travel stops and the travel stops being oriented in the same direction as the feeler, and the mandrel comprises lands on which the travel stops can abut.

Claim 16 (Currently Amended): A measurement device configured to measure a profile of a part, comprising:

a feeler;

a manipulation knob connected to the feeler;

a support;

a table with two perpendicular movements, the table linking the support to the feeler;

a pair of displacement transducers situated between mobile portions of the table , the pair of displacement transducer being configured to measure displacements according to the perpendicular movements;

a machining mandrel on which the part comprising the profile is installed; and

means for reading and storing in a memory the displacements measured, wherein the support and the mandrel are mutually movable and comprise complementary immobilization means,

wherein immobilization means of the support are respectively associated to immobilization means of the mandrel so as to determine one invariable immobilization position of the support on the mandrel,

~~Measurement device according to claim 14,~~ wherein the immobilization means of the support comprise a pair of pins, the mandrel comprises recesses having cross-section shapes corresponding to cross-section shapes of the pins, respectively, in which the pins can be engaged, the immobilization means of the support comprise a pair of travel stops, the feeler being situated between the travel stops and the travel ~~stops~~ stops being oriented in the same direction as the feeler, the mandrel comprises lands on which the travel stops can abut, the

immobilization means of the support further comprises a screw, and the immobilization means of the mandrel comprise an internal screw thread in which the screw can be engaged.

Claim 17 (Currently Amended): A measurement device configured to measure a profile of a part, comprising:

- a feeler;
- a support configured to support the feeler, the support being movable;
- a table with two perpendicular movements, the table linking the support to the feeler;
- a pair of displacement transducers disposed between the mobile portions of the table, the pair of displacement transducer being configured to measure displacements of the feeler;
- a mandrel to hold the part, the mandrel being configured to hold the part during a profile measurement and during a machining of the part;
- an operation device configured to read and store in a memory the displacements measured; and
- means for complementarily immobilizing the support and the mandrel,

wherein said means for complementarily immobilizing the support and the mandrel comprise a pair of pins.

Claim 18 (Currently Amended): Measurement device according to ~~Claim~~ claim 17, wherein the operation device comprises means for compensating the measured displacements for an excessive manipulation force causing a deformation of the feeler.

Claim 19 (Currently Amended): Measurement device according to ~~Claim~~ claim 17, wherein the feeler is configured to maintain a known direction, and the operation device is configured to compensate the displacement measurements for a wear of the feeler based on a

calibration measurement and a knowledge of a portion of the feeler sliding on portions of the profile of the part.

Claim 20 (Currently Amended): Measurement device according to ~~Claim~~ claim 1, wherein the feeler is configured to maintain a known direction, and the means for reading and storing is configured to compensate the displacement measurements for a wear of the feeler based on a calibration measurement and a knowledge of a portion of the feeler sliding on portions of the profile of the part.